Computer Science		
	Year 10	**Year 11**
Autumn 1	Theory – Systems architecture, how a computer works ● Concludes with a unit test (this is true of all theory units) Programming – getting started, FOR loop, lists, Boolean comparisons, strings, WHILE loops ● Weekly coding tasks to reinforce understanding (throughout year 10)	Theory – Algorithms Practical – learning to code the key searching and sorting algorithms, introduce a third IDE (either VS Code or PyCharm)
Autumn 2	Theory – Data representation (how computers use numbers) Programming – using libraries (random, turtle), creating menus, working with lists (methods and shortcuts), challenges to reinforce key skills	Theory – Programming techniques Programming – focus on second non-exam assessment, tackling a different problem with emphasis on use of pseudocode for planning
Spring 1	Theory – Networks, connections and protocols Programming – Introduce Thonny (a different IDE), using random numbers in simulations, permanent storage in text files, creating your own library of useful functions, try-accept, tuples/dictionaries/sets	Theory – Logic and languages Programming – focus on third non-exam assessment, further developing problem solving skills
Spring 2	Theory – Network security and network software Programming – Nested lists, JSON, authentication	Focused exam revision with some practical programming sessions to prepare for exam.
Summe	Theory – Impacts of digital technology Programming – Consolidation, creating a graphical user interface, graphing libraries	Focused exam revision with some practical programming sessions to prepare for exam. Two exams

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S u m m e r 2	Theory – mock exam revision, Programming – taking on the first of three non-exam assessments, learning to use flow diagrams and how to test programs	